

California Ambient Dioxin Air Monitoring Program Site Summary

Oakland - Fruitvale

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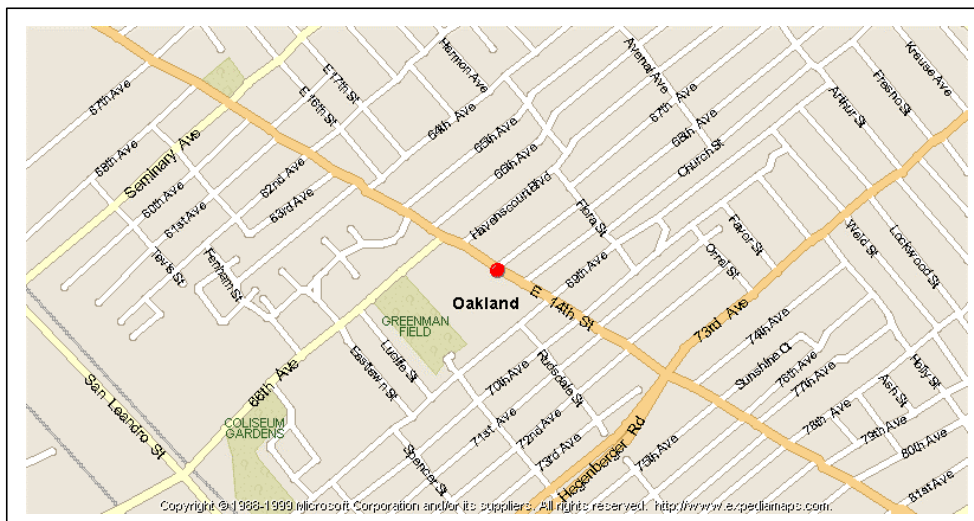
Site Location:

Monitoring for the California Ambient Dioxin Air Monitoring Program (CADAMP) in the Fruitvale area of Oakland is being conducted at Lockwood Elementary School. Lockwood Elementary is located at 6701 International Boulevard (East 14th Street) and is part of an educational complex that includes Havenscourt Middle School and a child development center. This educational complex is situated between the 580 and 880 freeways, approximately two miles southeast of an industrial area.



Site Approval:

In December of 2000 representatives of the Oakland Unified School District granted permission to the Air Resources Board (ARB) to install an ambient air monitoring station on the campus of Lockwood Elementary.



Monitoring Start Date:

Collection of samples for ambient air quality analysis for CADAMP began in December 2001 at Lockwood Elementary School.

Reason for Choosing Fruitvale:

Fruitvale was chosen as one of the nine sites for CADAMP because it is impacted by several categories of pollutant

emissions and because of the high school-age population in the area. Fruitvale lies between two major East Bay freeways that are a significant source of vehicular emissions. The area is downwind of several industrial operations that are sources of criteria pollutant and air toxic emissions, including potential

sources of dioxin. The Oakland International Airport, which is less than five miles from Lockwood Elementary, is a source of aircraft and ground-vehicle emissions.

Lockwood Elementary has a student population of nearly 1000. Havenscourt Middle School and the child development center, which are both adjacent to Lockwood, have a combined enrollment of over 800. There are an additional 20 public schools in the Fruitvale area between High Street and 98th Avenue.

Emission Sources:

An industrial area to the northwest of the Lockwood site includes a glass manufacturing facility, a concrete batch plant, and a medical waste incinerator. Major freeways located to the west and east of the site, and the Oakland International Airport, are significant sources of vehicle and aircraft exhaust. Other sources of air pollution within the Fruitvale area include neighborhood scale sources such as dry cleaners and service stations.

Monitoring Parameters:

Dioxin-like compounds that will be monitored for CADAMP include dioxins, furans and congener specific PCBs. A total of 31 compounds will be evaluated each month. Meteorological parameters will include wind speed, wind direction, ambient temperature and relative humidity.

Monitoring Schedule:

The dioxin sampler will be run for 28 consecutive days each month for the duration of the project. Quartz fiber filters and polyurethane foam (PUFs) comprise the sampling media. Filters will be collected and replaced every 6th day. PUFs will be collected on the 28th day. Filters and PUFs will be composited for a single monthly sample analysis. Meteorological data will be collected continuously.

Anticipated End Date:

The ARB anticipates that the ambient dioxin air monitoring will continue at Lockwood Elementary School for 2 years, ending after December 2003.

Agencies/Resources/Roles:

The ARB is the lead agency for the California Ambient Dioxin Air Monitoring and has overall responsibility for the project. The Bay Area Air Quality Management District (BAAQMD) provided assistance in selecting the Lockwood station and will perform all routine sample collection tasks. A laboratory under contract to the ARB will perform analysis of samples collected at Lockwood. Staff in the ARB Monitoring and Laboratory Division, Quality Management Branch (Operations Planning and Assessment Section) will have the lead role in coordinating sampling, tracking the project, validating the data, conducting quality control and quality assurance activities and writing the quarterly reports. ARB's Stationary Source Division (SSD) will evaluate ambient concentrations to prioritize risk management strategies. Data will be shared with the U.S. EPA and the BAAQMD.

Connection to Other Air Resources Board Programs:

In addition to providing data necessary to determine ambient dioxin, furan and PCB concentrations for CADAMP, monitoring at Lockwood Elementary School will be conducted for the Children's Environmental Health Protection Program under SB 25 (<http://www.arb.ca.gov/ch/programs/sb25/index.htm>). This monitoring will address the exposure of children to criteria pollutants, non-methane hydrocarbons (NMHC), and air toxics. Data collected at Lockwood Elementary School will also be used to support the ARB's Community Health Program (<http://www.arb.ca.gov/ch/ch.htm>) and will provide information for the ARB's ongoing efforts to mitigate the health risks from diesel particulate (<http://www.arb.ca.gov/diesel/background.htm>). The Planning and Technical Support Division of ARB is coordinating the Community Health Program and will use the data generated at the Lockwood Elementary School monitoring station to support other Community Health studies currently under development. Public outreach for the Community Health Program is being coordinated by the Planning and Technical Support Division.

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